

Parks College of Engineering, Aviation and Technology
Department of Physics
Bachelor of Science Curriculum

Freshman Year:

<i>Semester 1:</i>	CR	<i>Semester 2:</i>	CR
PHYS 111 Introduction to Physics	1	PHYS 161 Engineering Physics I	3
CHEM 161 Introduction to Chemistry I/ Lab	4	PHYS 162 Engineering Physics I Laboratory	1
ENGL 190 Advanced Strategies of Rhetoric	3	MATH 143 Calculus II	4
MATH 142 Calculus I	4	CSCI 145 Scientific Programming	3
Humanities Elective	3	THEO 100 Theological Foundations	3
Total Credit Hours	15	Total Credit Hours	14

Sophomore Year:

<i>Semester 1:</i>	CR	<i>Semester 2:</i>	CR
PHYS 163 Engineering Physics II	3	PHYS 261 Modern Physics	3
PHYS 164 Engineering Physics II Laboratory	1	PHYS 262 Modern Physics Laboratory	1
MATH 244 Calculus III	4	PHYS 311 Classical Mechanics	3
CMM 293 Small Group Presentation	1	MATH 355 Differential Equations	3
Allied Elective	3	CSCI 320 Numerical Analysis I	3
Social Science Elective	3	Allied Elective	3
Total Credit Hours	15	Total Credit Hours	16

Junior Year:

<i>Semester 1:</i>	CR	<i>Semester 2:</i>	CR
PHIL 205 Ethics	3	PHYS 421 Electricity-Magnetism I	3
		PHYS 341 Thermodynamics & Statistical Mechanics	3
PHYS 461 Quantum Mechanics	3	PHYS 386 Physics Research I	0
MATH 370 Advanced Mathematics for Engineers	3	MATH 403 Probability and Statistics	3
Open Elective	3	Allied Elective	3
Allied Elective	3	Allied Elective	3
Total Credit Hours	15	Total Credit Hours	15

Senior Year:

<i>Semester 1:</i>	CR	<i>Semester 2:</i>	CR
PHYS 351 Analog and Digital Electronics	4	PHYS 488 Physics Research III	3
PHYS Upper Level Course	3	PHYS 331 Optics	3
PHYS 487 Physics Research II	0	PHYS 332 Optics Laboratory	1
Allied Elective	3	PHYS Upper Division Course	3
Allied Elective	3	Allied Elective	3
Cultural Diversity Elective	3	General Elective	3
Total Credit Hours	16	Total Credit Hours	16

Total Credit Hours: 122

Name: _____

Advisor: _____

Prerequisites:

- CHEM 161 Introduction to Chemistry I/Lab _____
- CSCI 145 Scientific Programming _____
- PHYS 111 Introduction to Physics _____
- PHYS 161 Engineering Physics I _____
- PHYS 162 Engineering Physics I Lab _____
- PHYS 163 Engineering Physics II _____
- PHYS 164 Engineering Physics II Lab _____

Knowledge of Differential and Integral Calculus:

- MATH 142 Calculus I _____
- MATH 143 Calculus II _____
- MATH 244 Calculus III _____

Required Courses:

- PHYS 261 Modern Physics _____
- PHYS 262 Modern Physics Lab _____
- PHYS 311 Classical Mechanics _____
- PHYS 331 Optics _____
- PHYS 332 Optics Laboratory _____
- PHYS 341 Thermodynamics and Statistical Mechanics _____
- PHYS 351 Analog and Digital Electronics _____
- PHYS 421 Electricity and Magnetism I _____
- PHYS 461 Quantum Mechanics _____
- MATH 355 Differential Equations _____
- MATH 370 Advanced Mathematics for Engineers _____
- MATH 403 Probability and Statistics _____
- MATH 320 Numerical Analysis I _____

Two additional courses selected from:

- PHYS 312 Classical Mechanics II _____
- PHYS 422 Electricity and Magnetism II _____
- PHYS 462 Applications of Quantum Mechanics _____

Allied Electives:

Eight courses (24 hours) selected in consultation with advisor:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____

Research Experience:

- PHYS 386 Physics Research I _____
- PHYS 487 Physics Research II _____
- PHYS 488 Physics Research III _____

College Core:

- CMM 293 Small Group Presentation _____
- ENGL 190 Advanced Strategies of Rhetoric _____
- PHIL 205 Ethics _____
- THEO 100 Theological Foundations _____
- Social/Behavioral Science Elective _____
- Humanities Elective _____
- General Elective (Social/Behavioral or Humanities) _____
- Cultural Diversity Elective _____

Open Elective:

- One course _____

Physics Minor

PHYS 261 (without lab)
and any three upper
division courses